

4

**Notice of Allowability**

Application No.

09/927,204

Examiner

Thomas H. Stevens

Applicant(s)

FOLTIN ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/6/05.
2. ☒ The allowed claim(s) is/are 1-7, 9 and 11-20.
3. ☒ The drawings filed on 8/10/01 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

1. Claims 1-20 were originally presented.
2. Claims 8,10, were cancelled.
3. Claims 1-7,9 and 11-20 were re-examined and allowed.

#### ***Section I: Response to Applicants' Arguments (Dated 6/6/05)***

##### ***Statutory Double Patenting Rejection***

4. Rejection is withdrawn.

##### ***Obvious Double Patenting Rejection***

5. Applicants are thanked for addressing this issue. Based on applicants' terminal disclaimer dated 6/6/05, the prima facie double patenting rejection is negated.

#### ***Section II: Allowable Subject Matter***

6. The following is an examiner's statement of reasons for allowance:
7. The prior art of record doesn't expressly teach or render obvious the claimed invention as recited in claims 1. Specifically the allowable subject matter resides in the limitations, as recited in the context of entirety of the limitations of claim 1, directed to the creation of the following: *creating an echo-circuit that represents the plurality of parameters with nodes and time arcs, wherein the echo-circuit is stimulus independent, port-based, has no internal latch nodes, and is used in any static timing analysis (STA) tools, wherein the echo-circuit includes a dummy latch node that is controlled by an internally generated clock signal that becomes active when a latest clock signal from the circuit arrives at the output port, and wherein the echo-circuit enables a signal to*

Art Unit: 2123

*propagate from an input port to an output port only if the signal arrives at the output port later than a latest clock signal from any pin clock signal controlling the output port...*

Additionally, the prior lack teaching means for as stated in claim 11: *means for identifying relevant timing paths in the echo-circuit, wherein the relevant timing paths are associated with the plurality of parameters; means for identifying paths in the modeled circuit that connect sequential elements and correspond to the relevant timing paths in the echo-circuit; and means for comparing the relevant timing paths in the echo-circuit with the corresponding paths in the modeled circuit.*

Furthermore, the prior art doesn't teach or render obvious the claimed invention on computer medium as stated in claim 14.

Though the prior art of record expressly teaches the scanning of a series of dummy latches (Rizzolo) and constructing a model containing levels of latches with transparent edges (Avidan), neither art expressly stated or suggested the modeling of echo-signals. "A claim is anticipated if each and every element as set forth in the claim is found, with expressly or inherently described, in a single prior art reference."

*Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628 f.2d. 1226, 1236, 9 1053 (Red. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir.1989).

The motivation to combine the teachings of the prior art, including that which would have been known to one of ordinary skill in this art, was not uncovered so as to

Art Unit: 2123

render the claimed invention obvious. Dependent claims 2-7, 12-20 are allowable as they depend on allowed independent claims.

***Section III: Examiner's Amendment***

8. Authorization for this examiner's amendment was given per telephone interview with Kelly Lee (Registration Number #47,743) on 7/27/05.

Pg. 19 lines 16, insert "**330**" between port and will.

Pg. 20, lines 17, insert after nodes "**with input port 530**".

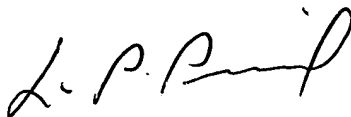
Pg. 21, lines 5, after 762. "**For the input port IN\_1 731 and IN\_2 732.**"

***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Leo Picard at (571) 272-3749. Central Fax number is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

July 27, 2005



THS

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100